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Job No.: CTCE/BBMP/W.No.14/RN/GSB-I/GR/2016-17 Date 13.02.2017

TEST REPORT ON GRADATION FOR COARSE GRADED GARNULAR SUB BASE

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan – 573201.
* Name of work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
* Sample ID	:	Coarse Graded-I
Technical Reference	:	IS : 2720 (Part - 4) 1985 (RA-2010), MORTH Table : 400-2
Date of Testing	:	13.02.2017

Oven Dry Wt (gm) : 5000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75	0	0	0	100	100
26.5	1305	1305	26.10	73.90	55-75
4.75	2315	3620	72.40	27.60	10-30
0.075	1250	4870	97.40	2.60	<10
PAN	130				
Total	5000				

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* Information is furnished by the Customer/Representative

Remarks: Satisfies MORTH Specifications as per Table 400-2, Grading I

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Job No.: CTCE/BBMP/W.No.14/RN/GSB-1/AL/2016-17 Date 13.02.2017

TEST REPORT ON ATTERBERG LIMITS FOR GRANULAR SUB BASE

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan – 573201.
* Name of work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
* Sample ID	:	GSB- (Coarse graded-I)
Technical Reference	:	IS : 2720 (Part - 5) 1985 (RA-2010), MORTH Table : 400-01
Date of Testing	:	13.02.2017

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	23.50	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

* Information is furnished by the Customer/Representative

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J No.: CTCE/BBMP/W.No.14/RN/WMM/Gradation/2016-17 18.02.2017

TEST REPORT ON GRADATION OF WET MIX MACADAM

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan – 573201.
* Name of Work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
Sample ID	:	Wet Mix Macadam
Technical Reference	:	IS 2386 (part-1)1963 (RA-2011)
Date of Testing	:	18.02.2017

Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits As per Morth Table 400-13
53	0	0	0	100	100
45	165	165	3.3	96.7	95-100
22.4	1590	1755	35.10	64.90	60-80
11.2	965	2720	54.40	45.60	40-60
4.75	645	3365	67.30	32.70	25-40
2.36	525	3890	77.80	22.20	15-30
0.600	365	4255	85.10	14.90	8-22
0.075	435	4690	93.80	6.20	0-8

*Information is furnished by the Customer/Representative.

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TEST REPORT ON GRADATION OF WET MIX MACADAM

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan – 573201.
* Name of Work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
Sample ID	:	Wet Mix Macadam
Technical Reference	:	IS 2386 (part-1)1963 (RA-2011)
Date of Testing	:	18.02.2017

Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits As per Morth Table 400-13
53	0	0	0	100	100
45	135	135	2.7	97.3	95-100
22.4	1595	1730	34.60	65.40	60-80
11.2	915	2645	52.90	47.10	40-60
4.75	715	3360	67.20	32.80	25-40
2.36	565	3925	78.50	21.50	15-30
0.600	425	4350	87.00	13.00	8-22
0.075	440	4790	95.80	4.20	0-8

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/W.No.14/RN/WMM/AIV/2016-17 18.02.2017

TEST REPORT ON IMPACT VALUE OF AGGREGATE

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan –
* Name of Work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
* Sample ID	:	Wet Mix Macadam
Technical Reference	:	IS : 2386(Part -4)-1963 (RA-2011)
Date of Testing	:	18.02.2017

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	392	393	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	88	89	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	304	304	
4	Aggregate Impact value = percent fines 100* (W2/W1)%	22.45	22.65	22.55

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Wet Mix Macadam is 30%

Note:

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Job No.: CTCE/BBMP/W.No.14/RN/WMM/AIV/2016-17 18.02.2017

TEST REPORT ON IMPACT VALUE OF AGGREGATE

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan –
* Name of Work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
* Sample ID	:	Wet Mix Macadam
Technical Reference	:	IS : 2386(Part -4)-1963 (RA-2011)
Date of Testing	:	18.02.2017

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	379	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	78	79	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	303	
4	Aggregate Impact value = percent fines 100* (W2/W1)%	20.58	20.68	**20.63**

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Wet Mix Macadam is 30%

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Jc No: CTCE/BBMP/W.No.14/RN/BM/AIV/2016-17 02.03.2017

TEST REPORT ON IMPACT VALUE OF AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan – 573201.
* Name of Work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
* Sample ID	:	Hot Mix Plant, Bangalore
Technical Reference	:	IS : 2386(Part -4)-1963 (RA-2011)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	02.03.2017

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	83	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	303	303	
4	Aggregate Impact value = percent fines 100* (W2/W1)%	21.30	21.50	**21.40**

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

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Job No: CTCE/BBMP/W.No.14/RN/BM/Sp_Wa/2016-17 03.03.2017

TEST REEPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. R. Nithin,** #66, Nisargadama, 3rd Main Road, 2nd Cross, Hemavathi Nagara, Hasan – 573201.
* Name of Work	:	Improvements to Roads & Drains at Muneshwara Nagara and Ashoka Nagara Ward No.14, Bagalagunte, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/600/1/2016-17 Dated: 10.01.2017
Technical reference	:	IS : 2386(Part -3)-1963 (RA-2011)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	03.03.2017

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 2	
1	Weight of aggregate suspended in water with the basket	W_1 g	2011	2012	2013	
2	Weight of basket suspended in water	W_2 g	750	750	750	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1261	1262	1263	
4	Weight of saturated surface dry aggregate in air	W_3 g	2018	2019	2021	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	757	757	758	
6	Weight of oven dried aggregate	W_4 g	2003	2006	2010	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.646	2.650	2.652	2.649
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.699	2.696	2.691	2.695
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.75%	0.65%	0.55%	0.65%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Water absorption value for Bituminous Macadam is 2.0%

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